

WHAT IS CLAIMED IS:

1. A guide wire comprising:

a first wire disposed on the distal side of said guide wire; and

5 a second wire disposed on the proximal side from said first wire, said second wire being made from a material having an elastic modulus larger than that of said first wire;

wherein said first wire and second wire are joined to each other by welding; and

10 said second wire has, in the vicinity of a welded portion between said first wire and said second wire, a small cross-sectional area portion having a cross-sectional area smaller than a cross-sectional area of a proximal end portion of said first wire.

15 2. A guidewire according to claim 1, further comprising a cover layer disposed over at least said welded portion.

3. A guide wire according to claim 1, wherein said small cross-sectional area portion has an outer diameter smaller than an outer diameter of the proximal end portion of said  
20 first wire.

4. A guidewire according to claim 1, wherein said small cross-sectional area portion includes a portion having a cross-sectional area gradually reduced in the direction toward the distal end of said guide wire.

25 5. A guidewire according to claim 1, wherein said small cross-sectional area portion includes a portion having an outer-diameter gradually reduced in the direction toward the distal end of said guide wire.

30 6. A guidewire according to claim 1, wherein said small cross-sectional area portion includes a first portion having an outer diameter gradually reduced in the direction toward the distal end of said guide wire, and a second portion having

an outer diameter gradually increased in the direction toward the distal end of said guide wire, said second portion being disposed on said distal side from said first portion.

5 7. A guide wire according to claim 6, wherein said small cross-sectional area portion has a third portion having a nearly constant outer diameter, said third portion being disposed between said first portion and said second portion.

8. A guide wire according to claim 6, wherein said first portion has a length in a range of 0.1 to 1,000 times a length  
10 of said second portion.

9. A guide wire according to claim 7, wherein said first portion has a length in a range of 0.1 to 1,000 times a length of said second portion.

10. A guidewire according to claim 1, wherein a flexural  
15 rigidity of the distal end of said second wire is nearly equal to a flexural rigidity of the proximal end of said first wire.

11. A guidewire according to claim 1, further comprising a step filling member for filling a stepped portion formed on the outer periphery of said welded portion.

20 12. A guide wire comprising:

a first wire disposed on the distal side of said guide wire; and

a second wire disposed on the proximal side from said first wire, said second wire having rigidity higher than a  
25 rigidity of said first wire;

wherein said first wire and said second wire are joined to each other by welding, and a welded portion formed by welding has a projection projecting in the outer peripheral direction; and

30 said second wire has, in the vicinity of a welded portion between said first wire and said second wire, a small cross-sectional area portion having a cross-sectional area

smaller than a cross-sectional area of a proximal end portion of said first wire.

13. A guide wire according to claim 12, further comprising a cover layer disposed over at least said welded  
5 portion.

14. A guide wire according to claim 12, wherein said small cross-sectional area portion has an outer diameter smaller than an outer diameter of the proximal end portion of said first wire.

10 15. A guide wire according to claim 12, wherein said small cross-sectional area portion includes a portion having a cross-sectional area gradually reduced in the direction toward the distal end of said guide wire.

15 16. A guide wire according to claim 12, wherein said small cross-sectional area portion includes a portion having an outer-diameter gradually reduced in the direction toward the distal end of said guide wire.

17. A guide wire according to claim 12, wherein said small cross-sectional area portion includes a first portion  
20 having an outer diameter gradually reduced in the direction toward the distal end of said guide wire, and a second portion having an outer diameter gradually increased in the direction toward the distal end of said guide wire, said second portion being disposed on said distal side from said first portion.

25 18. A guide wire according to claim 17, wherein said small cross-sectional area portion has a third portion having a nearly constant outer diameter, said third portion being disposed between said first portion and said second portion.

19. A guide wire according to claim 17, wherein said  
30 first portion has a length in a range of 0.1 to 1,000 times a length of said second portion.

20. A guide wire according to claim 18, wherein said

first portion has a length in a range of 0.1 to 1,000 times a length of said second portion.

21. A guide wire according to claim 12, wherein a flexural rigidity of the distal end of said second wire is  
5 nearly equal to a flexural rigidity of the proximal end of said first wire.

22. A guide wire according to claim 12, further comprising a step filling member for filling a stepped portion formed on the outer periphery of said welded portion.

10